

**Abstract**

5 The invention concerns a method for analysing an OFDM  
signal ( $r_{IF}(t)$ ) transporting a series of data symbols on  
several orthogonal carrier frequencies, each data symbol  
having a useful part separated by a guard period from  
neighbouring data symbols, with an analysing device (40)  
10 having a signal section (20) with a bandwidth ( $BW_A$ )  
smaller than the bandwidth ( $BW_{OFDM}$ ) of the OFDM signal.  
The method comprises the steps of low pass filtering of  
the OFDM signal with a low pass filter (24) and shifting  
(26) the spectrum of the OFDM signal in order to obtain a  
15 frequency shifted filtered OFDM signal ( $r(i)$ ), whereby the  
length of the impulse response of the low pass filter (24)  
is shorter than the length of the guard periods of the  
data symbols.

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(fig. 2 and fig. 3)